

Occasional Papers
OF THE
Boston Society of Natural History.

A NEW GENUS AND THREE NEW SPECIES OF
CRININE FROGS FROM AUSTRALIA.

BY ARTHUR LOVERIDGE.

MR. L. Glauert, of the Western Australian Museum at Perth, recently submitted for identification certain frogs which he had had difficulty in placing. Among these was a series of a diminutive, burrowing, myrmecophagous form of Brevicipitid-like appearance, but whose shoulder-girdle apparatus is undoubtedly arciferal in type. As this series fails to conform to any known genus, I propose to erect one for its reception and with which may be associated the name of our generous correspondent who has donated a series of paratypes to the Museum of Comparative Zoölogy.

Glauertia, gen. nov.

Pupil horizontal. Tongue elliptical, entire, free behind. Maxillary teeth apparently absent. Vomerine teeth absent. Tympanum absent. Fingers free, tips undilated. Toes webbed, tips undilated. Outer metatarsals united. Omosternum absent; metasternum cartilaginous, broadly dilated. Diapophyses of sacral vertebra moderately dilated.

Most nearly related to *Pseudophryne* and *Uperoleia* but with strongly webbed toes and the narrow mouth and facial configuration of a *Breviceps*.

At Mr. Glauert's request, the type is named after Captain A. R. E. Russell of Landor Station who was his host at the time these frogs were collected.

Glauertia russelli, sp. nov.

Type.—Western Australian Museum no. R. 2608; apparently a male,

from the bank of a creek flowing into the Gascoyne River near Landor Station, Western Australia, collected by L. Glauert, Esq.

Paratypes.—Twenty-four specimens with the same history as the type; of these six are Museum of Comparative Zoölogy no. 19,424-19,429.

Description.—Size small. Habit stout (bloated with ants). Head broader than long, snout acuminate or somewhat triangular, truncate at tip; nostril slightly nearer to the tip of the snout than to the anterior border of the eye, the latter distance about equal to the orbital diameter; canthus rostralis rounded, loreal region slightly concave; interorbital space flat, from once and a half to two times as broad as an upper eyelid; pupil horizontal; tongue elliptical, entire and free behind; vomerine teeth absent. Fingers cylindrical, well developed, first and fourth about equal, shorter than the second which is only about half the length of the third; subarticular tubercles strongly developed; a pair of prominent metacarpal tubercles; toes cylindrical, strongly webbed, at most a single joint free with the exception of the fourth which has three joints free, toes increasing in length in the following order: first, second, fifth, third, fourth; two very large metatarsal tubercles, the outer shovel shaped, its cutting edge almost at right angles to the long axis of the limb, the inner more rounded, larger than the free portion of the adjacent first toe; the metatarsal tubercles of the adpressed hind-limb mark the axilla, the longest toe, just short of, or beyond, the end of the snout.

Coloration.—(In life as depicted in a water-color sketch made by Mr. Glauert.) Olive, a pink, vertebral stripe bounded on either side by a brown band of irregular width; a pair of reddish-orange blotches on the scapular region and a smaller pair above the anus, the two groups more or less connected by an irregular, lateral patch of the same hue; a few scattered, brown spots on the flanks.

(In alcohol.) Above, brown, a light vertebral line only distinguishable posteriorly; a series of yellowish patches corresponding to the reddish-orange ones described above. Below, dirty yellow, uniform, or in some paratypes freckled with brown anteriorly, most heavily upon the throat.

Measurements.

| | W.A.M. R. 2608 | M.C.Z. 19,424 |
|-----------------------|----------------|---------------|
| | Type | Paratype |
| Snout to anus | 23.5 | 30 mm. |
| Fore limb from axilla | 11 | 14 |
| Hind limb from anus | 25 | 32.5 |

Unfortunately the taking of measurements as well as the anatomical examination for generic characters has been rendered difficult by the shrivelled condition of the series, resulting, apparently, from immersion in strong alcohol.

Pseudophryne blanchardi, sp. nov.

Type.—Museum of Comparative Zoölogy no. 19,259; a gravid female, from Millgrove, Victoria, collected by Dr. Frank N. Blanchard, April 1, 1928.

Paratypes.—Museum of Comparative Zoölogy no. 19,260; a male; also twelve other examples with the same history as the type which are in the collection of Dr. F. N. Blanchard.

Diagnosis.—Most nearly related to *P. australis* (Gray) of Perth, Western Australia, and to *P. brooksi* Loveridge from Manjimup, southwestern Australia. From the former, as well as from *P. albifrons* (Duméril and Bibron) of New South Wales, it may be readily distinguished by the absence of a light, frontal area and the possession of a pure-white throat. In limb length it occupies an intermediate position, the tip of the fourth toe of the adpressed hind-limb reaching to the eye in gravid females (as in *australis*) or to the end of the snout in males (as in *brooksi*); the hind limb is much shorter than that of *semimarmorata* Lucas from Victoria and New South Wales. In coloring it differs greatly; except for two orange-brown spots on the hinder aspect of the thighs, the hind aspect of the latter as well as the lower surface of the limbs is pure white in *blanchardi* while in our 121 examples of *semimarmorata* the hinder aspect of the thighs is dark and the lower surface of the limbs are marbled or heavily mottled with dark pigmentation.

Description.—Habit moderate, stout in gravid females. Head as broad as long; snout rounded in the type, definitely acuminate in males; the distance from the nostril to the tip of the snout is equal to that from the nostril to the anterior border of the eye, and equivalent to about two-thirds the orbital diameter; canthus rostralis feebly marked (quite absent in males), loreal region not concave; interorbital space flat, broader than an upper eyelid; pupil indistinct in type (clearly horizontally oval in some paratypes); tongue elongate, entire and free behind; vomerine teeth absent. Fingers cylindrical, first very much shorter than the second (in all the specimens); subarticular tubercles strongly developed; a pair of metacarpal tubercles indicated (masked by preservation); toes cylindrical, without web, increasing in length in the following order: first, second, fifth, third, fourth; two small, rounded, metatarsal tubercles, the inner *not more than half* as large as the first toe; the tibio-tarsal articulation of the adpressed hind-limb reaches midway between groin and axilla (in all females, almost to the axilla in males), the tarso-metatarsal articulation to axilla (in all females, to shoulder or just beyond in males).

Skin above (in formalin and alcohol) smooth, with smooth, flat warts tending to coalesce to form longitudinal, converging glandular lines from the postorbital regions to the vertebral line on a level with the axillæ.

Below, smooth, except on the throat and for a small patch in the anal and subanal region; a fold across the chest except in very bloated females.

Coloration.—(In alcohol.) Above, almost uniformly purplish-black except for the warts being a little darker; a vertical, light line just distinguishable on the tip of the snout; in some paratypes, though rarely, a light line above the region of the urostyle. Below, including the posterior aspect of thighs which carry a pair of orange-brown spots, pure white except for the belly and neck which are heavily vermiculated with purplish-black.

Measurements.

| | Type ♀ | Paratype ♂ |
|-----------------------|--------|------------|
| Snout to anus | 33 | 28 mm. |
| Fore limb from axilla | 15.5 | 15 |
| Hind limb from anus | 31 | 27 |

Helioporus insularis, sp. nov.

Type.—Western Australian Museum no. R. 4303; a gravid female from Rottneest Island, Western Australia, collected by L. Glauert, Esq.

Paratypes.—Museum of Comparative Zoölogy no. 18,198-18,202, being five juveniles collected on Rottneest Island by Dr. P. J. Darlington in October, 1931; also Western Australian Museum no. R. 4289 with the same history as the type.

Diagnosis.—Long confounded with *H. albopunctatus* Gray, this insular species may be distinguished by its much smaller size, by the third and fifth toes being nearly of equal length (in *albopunctatus* the third is very much longer than the fifth), and its very different coloring.

I am indebted to Mr. Glauert for pointing out that the Rottneest frog was not conspecific with the mainland species which he says is more of an inland form. Mr. Glauert was inclined to apply the name *Perialia eyrei* Gray to this frog but Gray distinctly states that the type came from 'Australia, on the banks of the river Murray' which is in line with our knowledge of Eyre's journeyings in South Australia. In the *Catalogue of Salientia*, Boulenger (1882, p. 272) alters this to 'W. Australia' and refers *eyrei* to the synonymy of *albopunctatus*. I believe *eyrei* represents an entirely different species, and it appears probable that Boulenger's redescription of *albopunctatus* is a composite of the two forms under the assumption that *eyrei* was the young of *albopunctatus*.

Coloration.—(In alcohol.) Rather resembling that of *Limnodynastes ornatus* (Gray). Above, pale, sandy brown, a light, vertical streak on the snout, the streak being flanked by dark brown; a transverse bar of dark brown uniting the upper eyelids; two, heavy, longitudinal, dorso-lateral bars as well as mottlings of the same color on the flanks. Below, uniformly pure white except for a little dusky freckling at the angle of the jaws.

Measurements.

| | W.A.M.R. 4303 | M.C.Z. 18,198 |
|-----------------------|---------------|---------------------|
| | Type, adult ♀ | Paratype, young |
| Snout to anus | 50 | 23 ¹ mm. |
| Fore limb from axilla | 28 | 15 |
| Hind limb from anus | 60 | 27 |

¹Less the rudiment of a tail still showing as a dark knob.

*Museum of Comparative Zoölogy,
Cambridge, Mass.*